Mapping a better world

Jun 4th 2009
From *The Economist* print edition

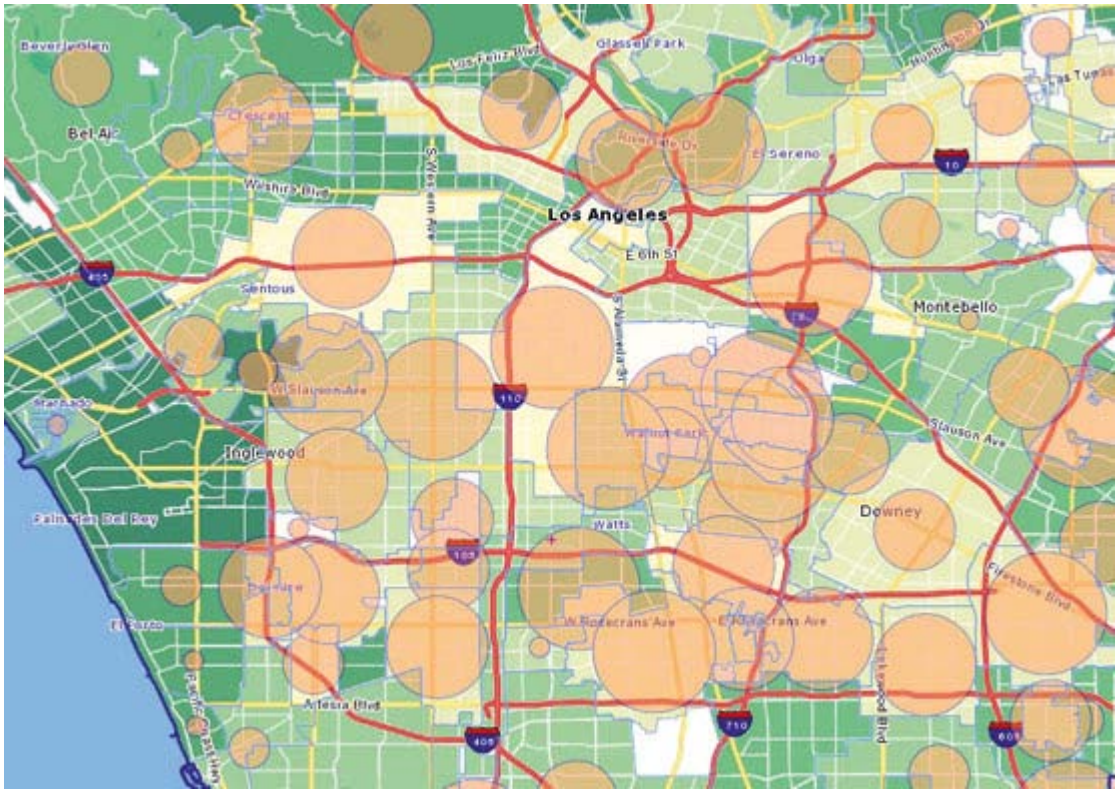
Software: Interest groups around the world are using mapping tools and internet-based information sources to campaign for change

CONVINCING people about the evils of housing segregation can be tough, says Barbara Samuels, a campaigner for fair housing at the American Civil Liberties Union (ACLU) of Maryland. “People say, ‘What’s so bad about living in an all-black neighbourhood?’ ” she explains. But using a map that displays all the vacant houses in a segregated neighbourhood, how few jobs exist there and how little public transport is available, “you can show graphically how people are segregated from opportunity,” she says. “Maps help you take complex information and portray it in a clear, intuitive manner. You can show segregation in a way that talking about it doesn’t do.”

And compiling such maps is much easier than it used to be, thanks to new mapping tools and sources of information on the internet. Ms Samuels remembers, for example, the tedium of trying to draw basic data on maps by hand in the 1990s. But in 2005 she was able to use maps that displayed 14 indicators of opportunity—created for her by a mapping-technology specialist—to help win a housing-desegregation court case.

For most people it is merely a handy tool to find a nearby pizzeria or get directions to a meeting. But mapping technology has matured into a tool for social justice. Whether it is to promote health, safety, fair politics or a cleaner environment, foundations, non-profit groups and individuals around the world are finding that maps can help them make their case far more intuitively and effectively than speeches, policy papers or press releases.

“Today you are allowed to visualise data in ways you couldn’t even understand just a few years ago,” says Jeff Vining of Gartner, a consulting firm. Along with web-based resources, coalescence around more advanced tools has also helped, such as the emergence of ESRI, based in Redlands, California, as the market leader in mapping software. And the rise of open-source projects such as MapServer, PostGIS and GRASS GIS have made sophisticated mapping available to non-profit groups with limited resources.



Areas with fewer parks (lighter rather than darker green) have higher rates of childhood obesity (larger red circles)

All this has made it much easier to create maps that explain—at a glance—something that might otherwise require pages of tables or verbiage. “A percentage or a table is still abstract for people,” says Dan Newman of MAPLight.org, a group based in Berkeley, California that charts the links between politicians and money. “With maps, you can show people how an abstract concept connects to where they live.” Wendy Brawer, founding director of GreenMap.org, a mapping site based in New York used by people in 54 countries, says maps can make a point even if they are in a foreign language. “Maps are really helpful for that ‘Aha!’ moment,” she says.

For example, “The Grim Reaper’s Road Map: An Atlas of Mortality in Britain”, published in 2008, reveals that the places with the highest numbers of smokers also have the highest rates of death from lung cancer. No surprise there. But the collection of maps from a British publisher of public-policy books also shows that cervical cancer is more likely to strike those in the north of England, and brain cancer is more prevalent in the south of Scotland. Such revelations can lead to investigations and eventual health improvements.

The Kirwan Institute for the Study of Race and Ethnicity in Columbus, Ohio, which created the maps used in Ms Samuel’s ACLU court case, has made “opportunity” maps of several American cities. The aim is to help people find neighbourhoods where jobs, health care, safety and public transport are in better supply—or to spur the creation of more such neighbourhoods. Rob Breymaier of MoveSmart.org, a non-profit group that encourages people to “move to opportunity”, recalls using Kirwan’s maps in Chicago in 2006 to help a family of eight. “They ended up finding a place in the north-west suburbs, which is a huge change from Chicago’s south side,” he says. The children ended up in better schools and stayed out of trouble, he says.

Others have used maps to expose violence. Ushahidi.com was launched by four technologists to map citizen reports of post-election violence in Kenya last year using Google Maps. “We’re building a platform that makes it easier to gather information around a crisis so that governments, or whoever is trying to hide the crisis, can’t do it anymore,” says Erik Hersman, Ushahidi’s operations director.

Sequences of maps can also be used to debunk misconceptions. Many in Los Angeles were pleased, for example, to learn that gun violence had decreased since the mid-1990s. But by developing a series of maps showing where shootings continued to happen, a local non-profit group called Healthy City was able to show that for some Los Angelenos, gun violence was as bad as ever.

MAPlight used a similar time-lapse approach to show the influence of money on congressional votes. Starting in January 2007, it tracked which states (those growing sugar-beets and sugar-cane, it turned out) were making the most generous political donations in the run-up to a vote in July 2007 on subsidies for the sugar industry. But once the vote was tallied and the subsidy granted, states that had appeared bright red with political contributions suddenly revert to tan, indicating an instant drop in donations. “We make visible and real something that is usually invisible and abstract,” says Mr Newman.

Changing the way American politics is funded is a tall order. But some map-based campaigns have already produced clear results. For example, the Food Trust, a campaign group based in Philadelphia, used maps as part of its fight to reduce diet-related disease and malnutrition in urban parts of America. “I remember the first supermarket-commission meeting,” says Jennifer Kozlowski, special assistant for the environment to David Paterson, the governor of New York. “Some of the maps in the report mapped obesity-related deaths and access to produce markets. It was as clear as day that something needed to be done.” In January Mr Paterson announced the Healthy Food/Healthy Communities Initiative, including $10m in grants and loans for supermarket projects in under-served communities.

Such examples underscore why campaigners are rushing to make the most of map technology. “We don’t just want to be about mapping,” says John Kim of Healthy City. “Maps don’t change the world—but people who use maps do.”